IN THE CLAIMS:

Please amend the claims as shown below.

1. (Currently Amended) An electrode material for a lithium secondary battery, comprising particles of a solid state alloy having silicon as a main component, wherein the particles of the solid state alloy have a microstructure in which a microcrystal or amorphous material ~~comprising~~ of an element other than silicon[[,]] is dispersed in microcrystalline silicon or amorphized silicon, the microstructure being observed by using a transmission electron microscope,

wherein the solid state alloy is composed of silicon and at least a first element A having a lower atomic ratio than silicon, where the first element A is at least one element selected from the group consisting of tin, indium, gallium, copper, aluminum, silver, zinc and titanium,

wherein the solid state alloy has a silicon content of 50 weight % or higher and 95 weight % or lower,

wherein the microcrystal or amorphous material ~~comprising~~ of an element other than silicon contains a pure metal or a solid solution,

wherein the solid state alloy has an element composition in which the solid state alloy is completely mixed and has a single phase in a melted liquid state,

wherein the particles of the solid state alloy are in the form of a powder, and an uppermost surface of the powder is covered with an oxide film to prevent the powder from reacting with oxygen, ~~and~~

wherein the oxide film has a thickness in the range of 2 to 10 nm and comprises an oxide of an element selected from the group consisting of aluminum, titanium, vanadium, yttrium, and zirconium,

wherein the half value width for the diffraction intensity at 2θ of the main peak of the X-ray diffraction chart of the particles of the solid state alloy is 1.0° or more, and

wherein the weight percentage of oxygen of the particles of the solid state alloy is in the range of 0.2 to 5% by weight.

2 to 4. (Cancelled)

5. (Currently Amended) The electrode material for a lithium secondary battery according to claim 1, wherein the solid state alloy is composed of silicon, at least a first element A and a second element E each having a lower atomic ratio than silicon; the atomic ratio of the first element A is higher than the atomic ratio of the second element E; the first element A is at least one element selected from the group consisting of tin, aluminum and zinc; the second element E is at least one element selected from the group consisting of copper, silver, zinc, titanium, aluminum, vanadium, yttrium, zirconium and boron; and the first element and the second element are different from each other ($A \neq E$).

6. (Cancelled)

7. (Currently Amended) The electrode material for a lithium secondary battery according to claim 1, wherein the solid state alloy contains a eutectic.

8. (Original) The electrode material for a lithium secondary battery according to claim 7, wherein the eutectic is selected from the group consisting of:

(a) a eutectic of silicon and a first element A, the first element A being at least one element selected from the group consisting of tin, indium, gallium, copper, aluminum, silver, zinc and titanium;

(b) a eutectic of silicon and a second element E, the second element E being at least one element selected from the group consisting of copper, silver, zinc, titanium, aluminum, vanadium, yttrium, zirconium and boron;

(c) a eutectic of the first element A and the second element E, the first element and the second element being different from each other;

(d) a eutectic of any combination of (a), (b), and (c).

9. (Currently Amended) The electrode material for a lithium secondary battery according to claim 1, wherein the silicon in the solid state alloy is doped with at least one element selected from the group consisting of boron, aluminum, gallium, antimony and phosphorous at a dopant amount of an atomic ratio in a range of 1×10^{-8} to 2×10^{-1} with respect to the silicon.

10. (Cancelled)

11. (Previously Presented) The electrode material for a lithium secondary battery according to claim 9, wherein the dopant has an atomic ratio in a range of 1×10^{-5} to 1×10^{-1} with respect to the silicon.

12. (Previously Presented) The electrode material for a lithium secondary battery according to claim 9, wherein the dopant is boron.

13. (Currently Amended) The electrode material for a lithium secondary battery according to claim 1, wherein the particles of the solid state alloy ~~having silicon as a main component~~ have an average particle diameter of 0.02 μm to 5 μm.

14. (Cancelled)

15. (Currently Amended) The electrode material for a lithium secondary battery according to claim 1, wherein the particles of the solid state alloy ~~having silicon as a main component~~ are complexed with at least a material selected from the group consisting of a carbonaceous material and metal magnesium.

16. (Previously Presented) An electrode structure comprising an electrode material according to claim 1, a conductive auxiliary material, a binder and a current collector.

17. (Original) The electrode structure according to claim 16, wherein the conductive auxiliary material is a carbonaceous material.

18. (Original) A secondary battery comprising an electrolyte, a positive electrode and a negative electrode using an electrode structure according to claim 16, wherein the secondary battery utilizes a lithium oxidation reaction and a lithium ion reduction reaction.

19. (Original) The secondary battery according to claim 18, wherein a material of the positive electrode is a lithium-transition metal complex oxide comprising at least yttrium or yttrium and zirconium.

20. (Currently Amended) An electrode material for a lithium secondary battery, comprising particles of a solid state alloy having silicon as a main component, wherein the particles of the solid state alloy have a microstructure in which a microcrystal or amorphous material ~~comprising~~ of an element other than silicon[[,]] is dispersed in microcrystalline silicon or amorphized silicon, the microstructure being observed by using a transmission electron microscope,

wherein the solid state alloy is selected from the group consisting of Si-Ti alloy, boron doped Si-Ti alloy, Si-Sn-Ti alloy, Si-Sn-Al alloy, Si-Zn-Al alloy, Si-Al-Cu alloy, Si-Sn-Al-Ti alloy, Si-Sn-Zn alloy, Si-Sn-Ag alloy, Si-Sn-Zn-Ti alloy, Si-Al-B alloy, Si-Sn-Sb alloy, Si-Sn-Sb-B alloy, Si-Sn-Cu-B alloy, Si-Sn-Al-B alloy, Si-Sn-Al-Sb alloy

and Si-Sn-Al-Sb-B alloy,

wherein the solid state alloy has a silicon content of 50 weight % or higher and 95 weight % or lower,

wherein the microcrystal or amorphous material ~~comprising~~ of an element other than silicon contains a pure metal or a solid solution,

wherein the solid state alloy has an element composition in which the solid state alloy is completely mixed and has a single phase in a melted liquid state,

wherein the particles of the solid state alloy are in the form of a powder, and an uppermost surface of the powder is covered with an oxide film to prevent the powder from reacting with oxygen, ~~and~~

wherein the oxide film has a thickness in the range of 2 to 10 nm and comprises an oxide of an element selected from the group consisting of aluminum, titanium, vanadium, yttrium, and zirconium,

wherein the half value width for the diffraction intensity at 2θ of the main peak of the X-ray diffraction chart of the particles of the solid state alloy is 1.0° or more, and

wherein the weight percentage of oxygen of the particles of the solid state alloy is in the range of 0.2 to 5% by weight

21. (Previously Presented) An electrode structure comprising an electrode material according to claim 20, a conductive auxiliary material, a binder and a current collector.

22. (Previously Presented) A secondary battery comprising an electrolyte, a positive electrode and a negative electrode using an electrode structure according to claim 21, wherein the secondary battery utilizes a lithium oxidation reaction and a lithium ion reduction reaction.